**Bioinformatics Question Set Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. What is bioinformatics?
2. Why did bioinformatics develop as a field of work?

**Exercise 1:**

1. What is the function of nucleotide BLAST?
2. What do BLAST scores indicate?
3. What does the query coverage indicate?
4. What does an E value indicate?
5. What was the point of this exercise? Summarize your results.

**Exercise 2:**

1. What is the function of GenBank?
2. What are the characteristics of the FASTA format?
3. What was the point of this exercise? Summarize your results.

**Exercise 3:**

1. What mutation causes Sickle Cell Disease?
2. What was the point of this exercise? Summarize your results.

**Exercise 4:**

1. What does blastx do?
2. What does protein blast do?
3. Which sequence in the database is most similar to the one you submitted? Are the sequences identical?
4. What was the point of this exercise? Summarize your results.

**Exercise 5:**

1. What is the difference between Needle and Water?
2. How does Local alignment differ from Global alignment?
3. What was the point of this exercise? Summarize your results.

**Exercise 6:**

1. What is an ORF?
2. What information can you find at OMIM?
3. What was the point of this exercise? Summarize your results.

**Exercise 7:**

1. What information can you find at the ORF finder site?
2. What is cDNA?
3. What was the point of this exercise? Summarize your results.

**Exercise 8:**

1. What information can you find using the BPROM site?
2. What does -10 box and -35 box mean?
3. What was the point of this exercise? Summarize your results.